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with isoniazid and pyrazinamide made "short-course" 6-months treatment possible. The recent epidemic spread of HIV/AIDS and an increase in antituberculosis drug-resistance, making tuberculosis virtually untreatable in some instances, has placed tuberculosis programmes under severe pressure. New treatment regimens are direly needed.

For the first time in decades, there are now multiple new drugs in the pipeline for the treatment of tuberculosis. In addition, existing drugs are being repurposed or optimized with the goal of shortened treatment duration for drug-sensitive tuberculosis and safer, shorter treatments for multidrug-resistant tuberculosis. High-dose rifamycins and fluoroquinolones have treatment-shortening potential when used for drug-sensitive tuberculosis. Bedaquiline, an antituberculosis drug with a novel mechanism of action, and delamanid, a nitroimidazole, are entering phase 3 trials. Both improve rates of sputum culture conversion among patients with drug resistant tuberculosis. Other nitroimidazoles and oxazolidinones are in Phase 2 testing, as are combinations involving multiple new chemical entities.

Development of novel antituberculosis agents and regimens currently involves determination of early bactericial activity over the first 14 days of treatment as the first clinical investigation undertaken to establish a basic relationship between dose and antituberculosis activity and obtain limited information about safety and tolerability. The information obtained is refined in Phase 2 studies over 8-weeks that prepare the ground for definite Phase 3 studies for the conduct of which considerable capacity building and funding is still required.

A biomarker for early indication of treatment effects or cure could greatly simplify antituberculosis regimen development. Clear identification of the different populations of mycobacteria that are present in sputum at the start of treatment, and measurement of their rise or fall, could contribute to the identification of early signals of drug activity that provide sterilization of lesions. This area will start to be resolved only when the results of long-term studies of new regimens regarding relapse rates become available and candidate biomarkers can be validated.

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Type: Invited Presentation

Final Abstract Number: 37.001
Session: Antibiotic Stewardship
Date: Saturday, April 5, 2014
Time: 15:45-17:45
Room: Room 1.60

Antimicrobial stewardship: Limits for implementation

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Antibiotic stewardship programme (ASP) is a multifaceted approach to improve patients' clinical outcomes, prevent the emergence of antimicrobial resistance, and reduce hospital costs by prudent and focused antimicrobial use. Development of local treatment guidelines according to local ecology, rapid diagnostic in microbiology laboratory, dosage optimization following pharmacokinetic and pharmacodynamic profiles, formulary restriction for specific classes of antibiotics, appropriate duration of antibiotic workers, are fundamental components of an efficient ASP. Numerous studies have showed that it is possible to change antibiotic prescription attitudes in hospital, at different ecological, cultural and economical levels and ASP might play a significant role in the reduction of colonization and infections caused by antibiotic-resistant bacteria. Major risk in implementing ASP is the lack of consideration of local ecology and strict quality indicators. There is still an open debate over which outcomes to measure and the appropriate study design that can objectively assess ASP despite the limitations inherent in the structure of most such programs. European networks to define best strategies and antibiotic-care bundles need to be supported at national and international level.

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Social media for stewardship: Progress or a waste of time?

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Do you think the word "tweet" means the sound a bird makes? If a patient says "Doctor help me I'm addicted to twitter! and the doctor replies, "Sorry I don't follow you", are you laughing? If not, then this lecture will help you learn how to apply social media (Twitter and Facebook) in a meaningful way for antimicrobial stewardship programs (ASP). Health care providers who are expert Twitter-users state that Twitter is worth taking the time to figure out because of its powerful ability to amplify a message above and beyond current audiences. The world is losing the battle against antimicrobial resistant organisms. Antimicrobial stewards needs to engage colleagues, patients and consumers to understand that antibiotic resistance is one of the world's most pressing public health threats. Peer-reviewed articles in ID journals do not reach these audiences therefore additional strategies are necessary. Twitter for stewardship has a 2-fold purpose. First it can help advocate the stewardship message to preserve antibiotics. Secondly, twitter allows one to discover, interact and learn from other infectious diseases stewardship expert's worldwide. The twitter user must find a niche (stewardship) and then start to engage in trending topics (#antibioticresistance). The user can be passive on twitter and choose to follow organizations (@IDSAInfo @ECCMID @SouthAfricanASP @CDC_eHealth @WHO) or specific stewardship healthcare advocates (@IDPharmD) or the user can be become active and send out "tweets" that help advocate ASP. This is especially helpful for resource limited countries because twitter is free to use. Globally, there are over 1.1 billion people on Facebook. It allows the user to discover and interact with interesting people or organizations in the field of antimicrobial stewardship. This lecture will demonstrate how the CDC used Facebook to identify an outbreak in real-time and then connect with individuals to resolve the outbreak. The power behind social media and its impact on getting the antimicrobial stewardship message out to the world should